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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,615	11/21/2003	Ronald Hauf	HAUF-2	3140

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HENRY M FEIEREISEN, LLC  
350 FIFTH AVENUE  
SUITE 4714  
NEW YORK, NY 10118

EXAMINER

MCCLLOUD, RENATA D

ART UNIT PAPER NUMBER

2837

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/719,615	Applicant(s) HAUF, RONALD	
	Examiner Renata McCloud	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 5 recite the limitation "the event". There is insufficient antecedent basis for this limitation in the claim.

Claims 9 and 10: Regarding claims 9 and 10, the phrase "so as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (US5333706) in view of Yamada et al (US 6213571) and further in view of Shin et al (US 6531839).

**Claims 1 and 5:** Mori teaches a drive system with an electric motor, comprising an integrated armature short-circuit brake having a first delay time, a mechanical brake having a

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second delay time, and a controller (12) applying a control signal to the integrated armature short circuit brake (5; col. 4:51-55) and the mechanical brake (7/8, col. 3:43-47) at an activation time for immediately stopping the electric motor in the event of a malfunction which prevents a controlled slow-down of the electric motor (col. 2:15-27, 4:61-68), wherein the armature short-circuit brake is disengaged when a load limit for the electric motor or the controller has been reached (col. 5:11-15, fig 2, step 209 when the speed reaches or is lower than a speed limit, the electromagnetic brake is released). Mori does not explicitly recite short circuit brake is disengaged when a thermal load limit has been reached or that the first delay time being shorter than the second delay time. However, Mori does teach that the power signal to the motor is based on the speed (col. 3:55-63). Yamada et al teach disengaging a short circuit brake a thermal load limit for the electric motor or the controller has been reached (col. 1:56-65, current). Shin et al teach that it is well known in the art that mechanical braking has a longer delay time than electrical/short-circuit braking (col. 1:39-64) and that the power to the motor is based on speed and that only mechanical braking is used during high speed/high power in order to prevent thermal overload (fig. 11; col. 7:27-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Mori to have a thermal load limit as suggested by Mori and as taught by Yamada et al, and to have delay times as taught by Shin et al in order to safely control the braking of the motor since the power is based on the speed and since it is well known in the art that mechanical braking has a longer delay than short circuit braking.

**Claims 2 and 6:** Mori teaches the load limit is defined by at least one parameter selected from the group consisting of a maximum current, a product of a current and a reaction time, a reaction time and a system temperature (col. 3:55-60, power based on depression time and speed). Yamada et al teach the thermal load limit is defined by at least one parameter

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selected from the group consisting of a maximum current, a product of a current and a reaction time, a reaction time and a system temperature (col. 1:56-65, current).

**Claims 3 and 7:** Yamada et al teach a parameter stored in a memory of the controller (col. 3: 7-19). Mori et al teach also teach storing a parameter in a memory of the controller (col. 3:55-57).

**Claims 4 and 8:** Mori teaches the short circuit brake remains engaged if danger is detected (col. 2:28-36). Yamada et al teach the short circuit brake remains engaged if a danger is detected (col. 12:1-19).

**Claims 9 and 10:** Shin et al teach an inverter (fig 2: 200) connected to an armature of the motor (100; col. 3:66-4:20), the controller (fig. 1:300) applying a control signal to the inverter (200) to short circuit the armature of the motor (col. 6:6-15).

### ***Response to Arguments***

5. Applicant's arguments filed 8/21/06 have been fully considered but they are not persuasive. In response to applicant's argument that Mori does not teach disengaging the short circuit brake when the thermal load limit of the motor or the controller reaches a thermal limit, Mori teaches that the power to the motor is based on speed and that when the speed reaches a lower limit, the short circuit brake is deactivated. When the driver needs to rapidly brake (fig. 2:203), both the mechanical brake and the short circuit brake are actuated (fig. 2:205). Once the speed decreases to a limit (fig 2:206), the short circuit brake is deactivated, leaving only the mechanical brake to continue with the remainder of the braking (fig 2:209). Applicant's claim language is broad and reads "when a thermal load limit is reached". Therefore, the limit may be a minimum and not necessarily a maximum.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Yamada et al teach disengaging a short circuit brake during a thermal overload. Shin teaches that it is well known in the art that a mechanical brake has a longer delay time than a short circuit brake.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (571) 272-2069. The examiner can normally be reached on Mon.- Fri. from 5:30 am - 2pm.

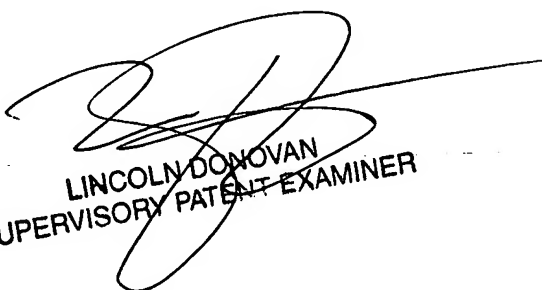
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Renata McCloud  
Examiner  
Art Unit 2837

rdm



LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER